

The diagram illustrates a system architecture for service management, organized into two main functional areas separated by a dashed line (14).

Top Area (Service Level Management):

- Business Processes (11)** are *composed of* **Services (12)**.
- Service Level Reports (17)** are *composed of* **Service Levels (16)**.
- Service Levels (16)** are *marked by* **Service Parameters (15)**.
- Service Parameters (15)** are *measured by* **Services (12)**.
- Component Parameters (19)** are *mapped into* **Service Parameters (15)**.
- Component Parameters (19)** are *monitored/controlled by* **An Agent (20)**.

Bottom Area (Service Delivery and Agent Management):

- Services (12)** are *composed of* **Components (18)**.
- Components (18)** are *monitored/controlled by* **Component Parameters (19)**.
- Components (18)** are *is a kind of* **Transmission Device (27)**, **Transmission Line (28)**, **Computer System (29)**, and **Application (30)**.
- An Agent (20)** is *is a kind of* **Device Agent (21)**, **Traffic Agent (22)**, **System Agent (23)**, **Application Agent (24)**, **Special-Purpose Agent (25)**, and **Multicomponent Agent (26)**.

A dashed box labeled 14 encloses the **Services (12)** and **Service Parameters (15)** components.

Fig. 1

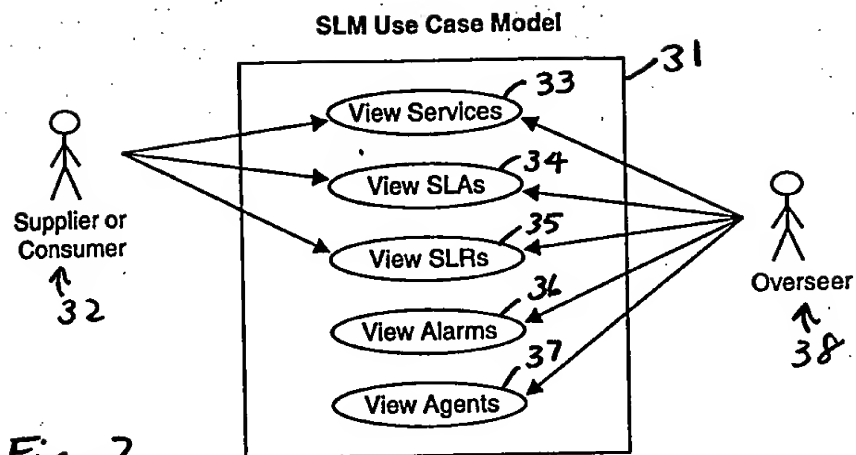


Fig. 2

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002250" 52224560

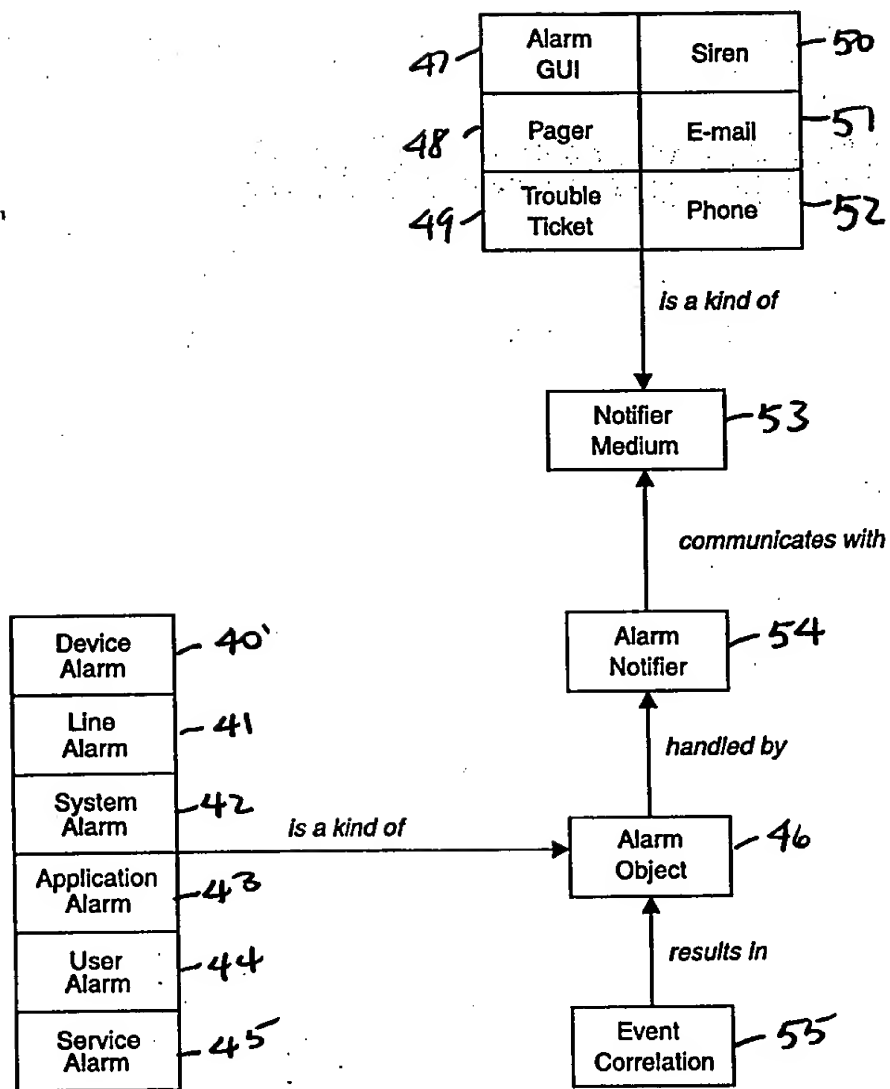
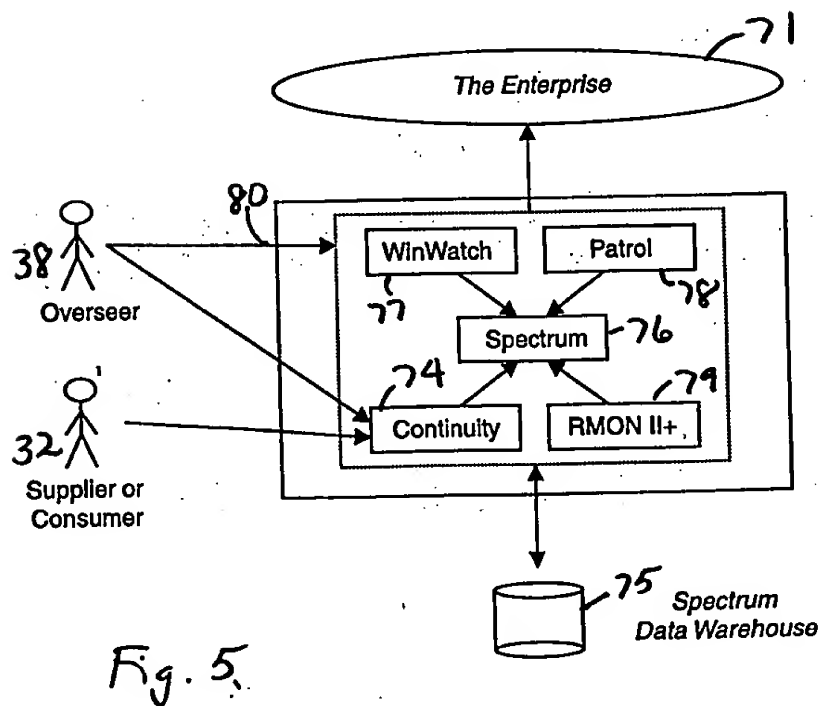
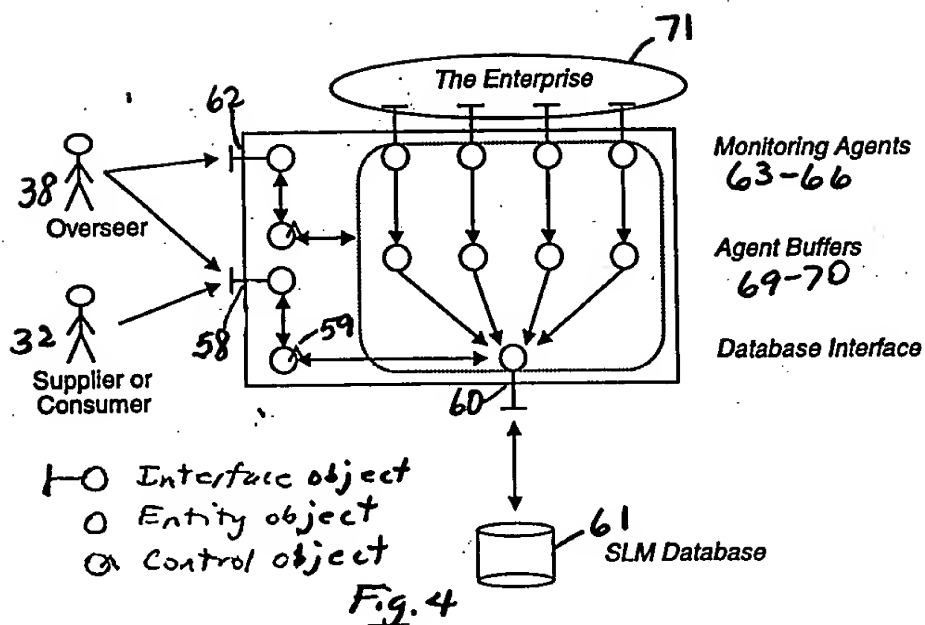


Fig. 3

00577225-052300



005250 5227560 09577225 .052300

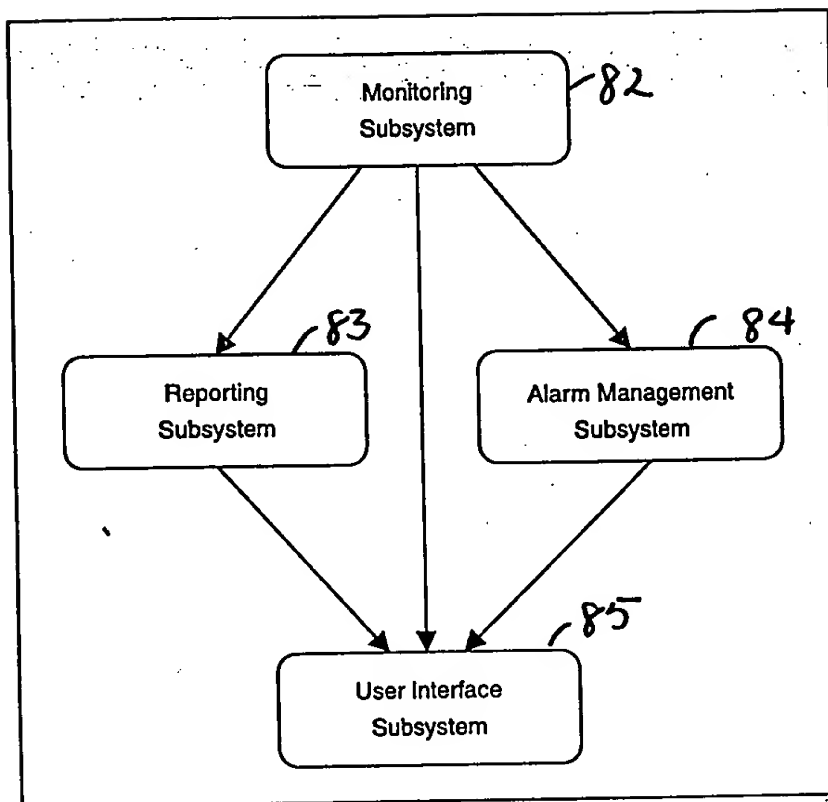


Fig. 6

0057225-052300

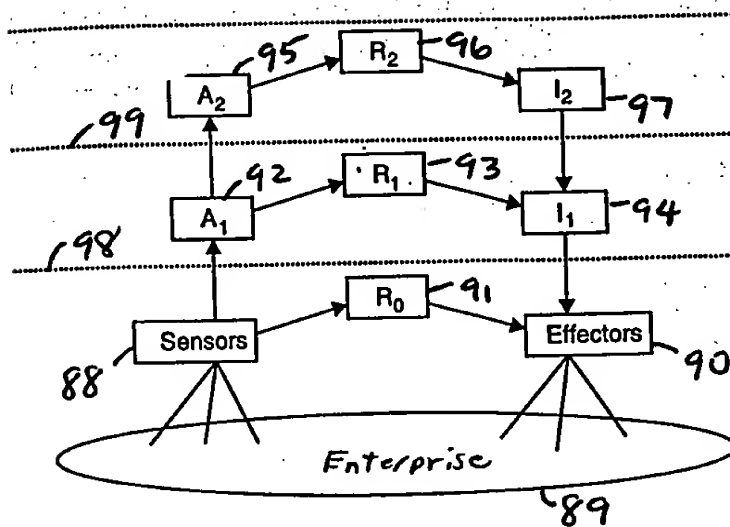


Fig. 7

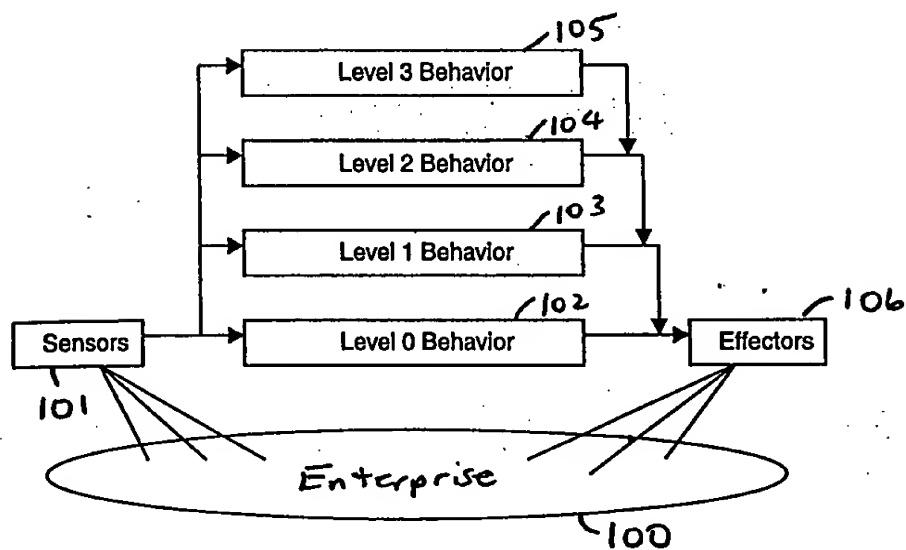


Fig. 8

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Level 2 Abstraction,
Reasoning, Instruction

Level 1 Abstraction,
Reasoning, Instruction

Level 0 Abstraction,
Reasoning,
Instruction

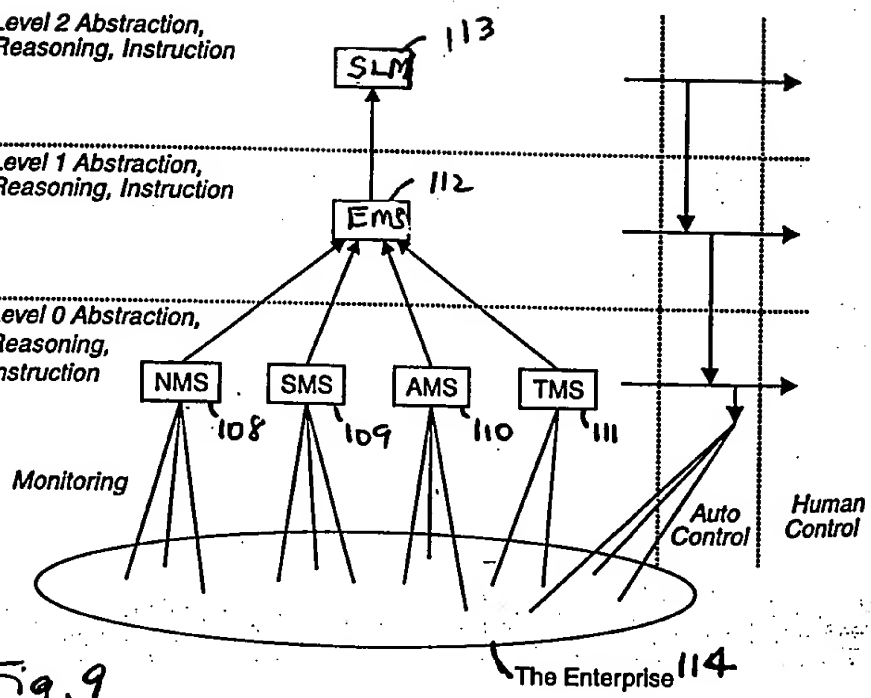


Fig. 9

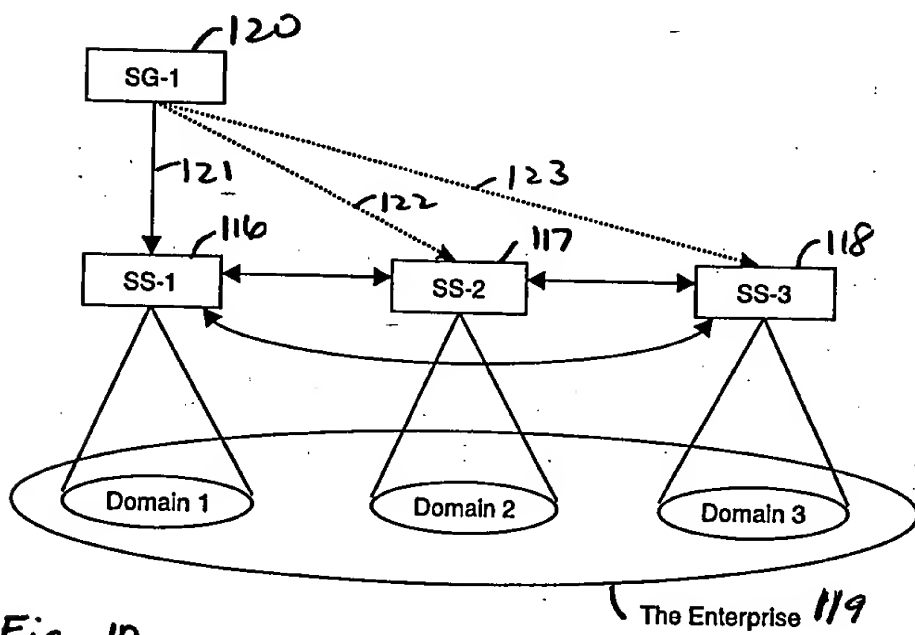


Fig. 10

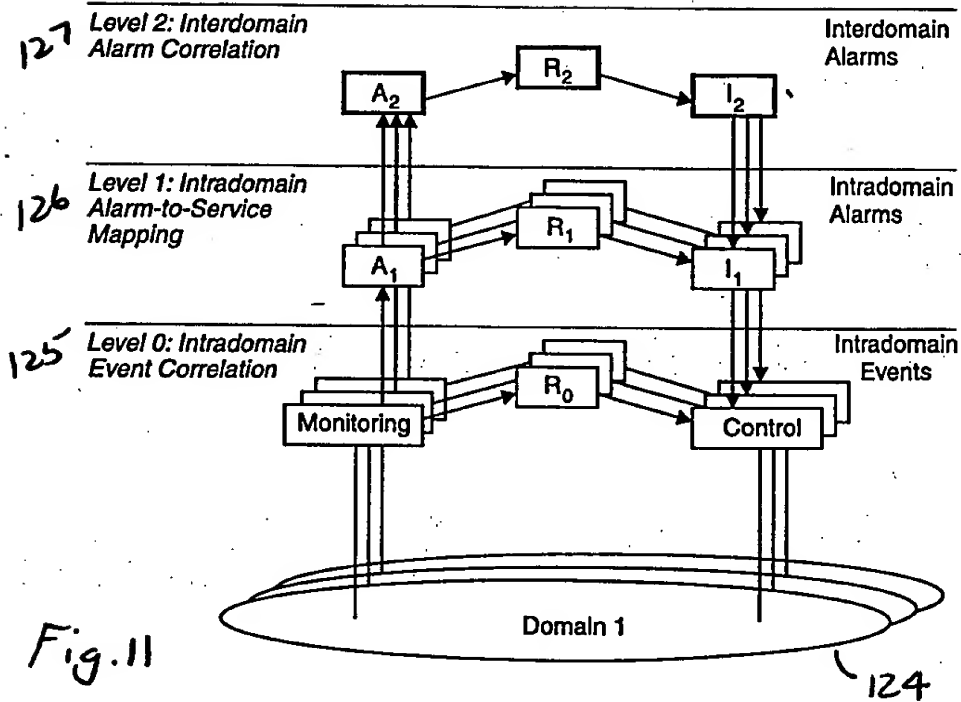


Fig. 11

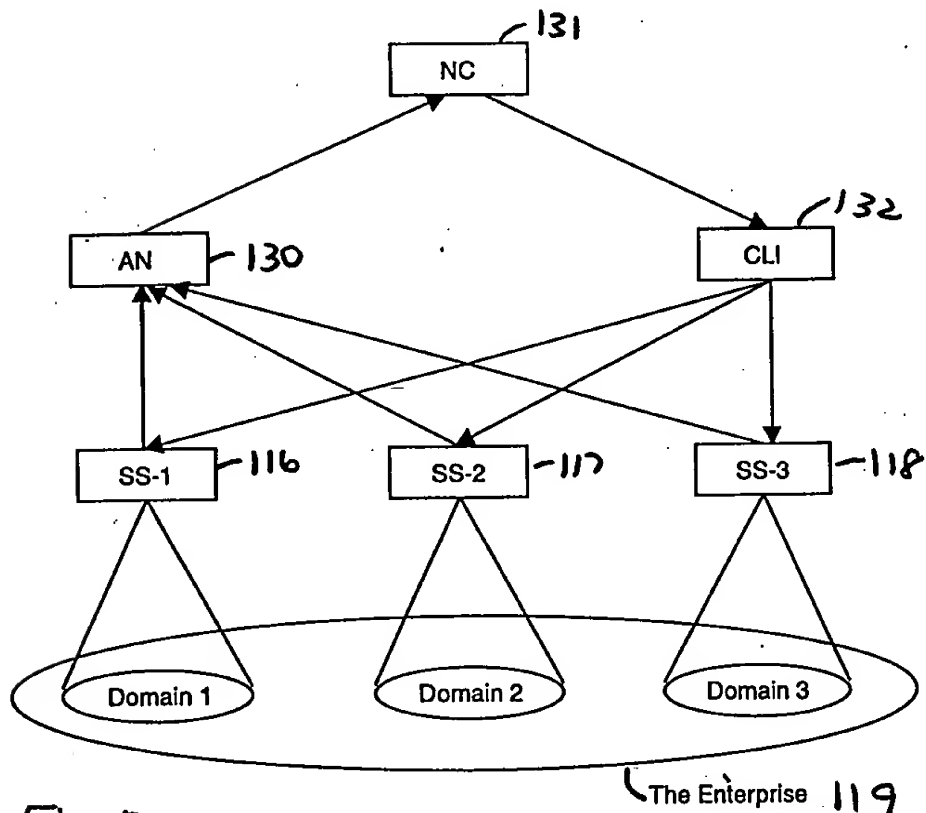


Fig. 12

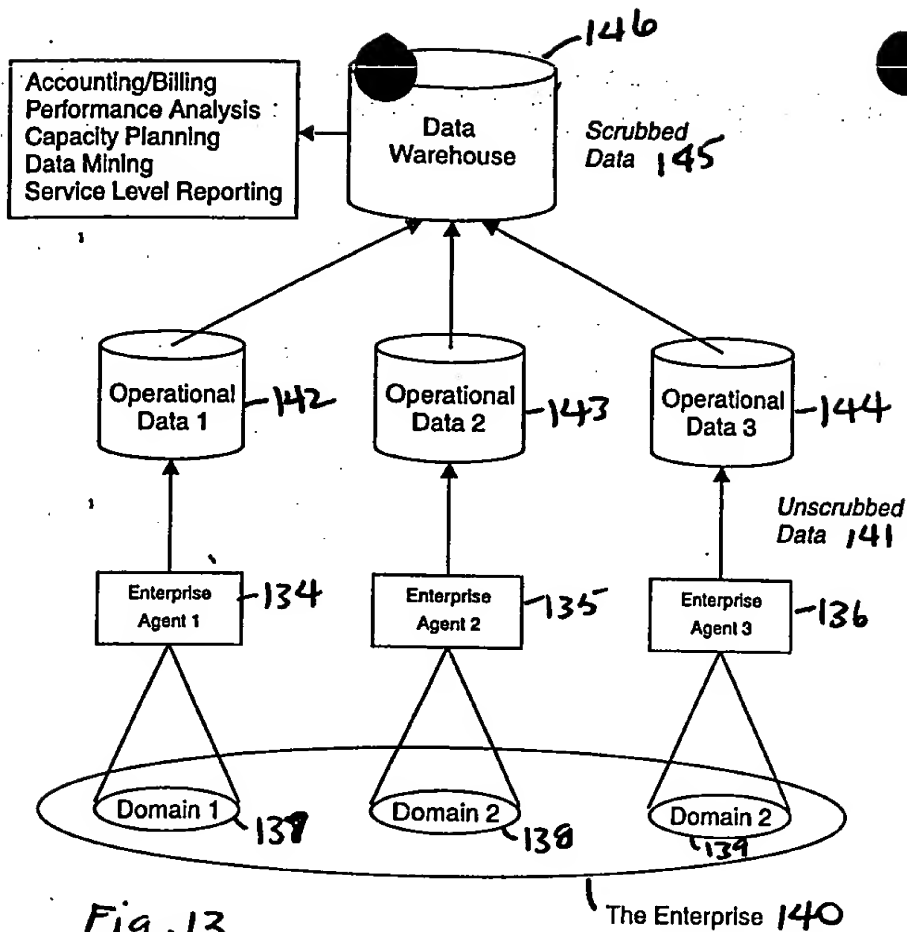


Fig. 13

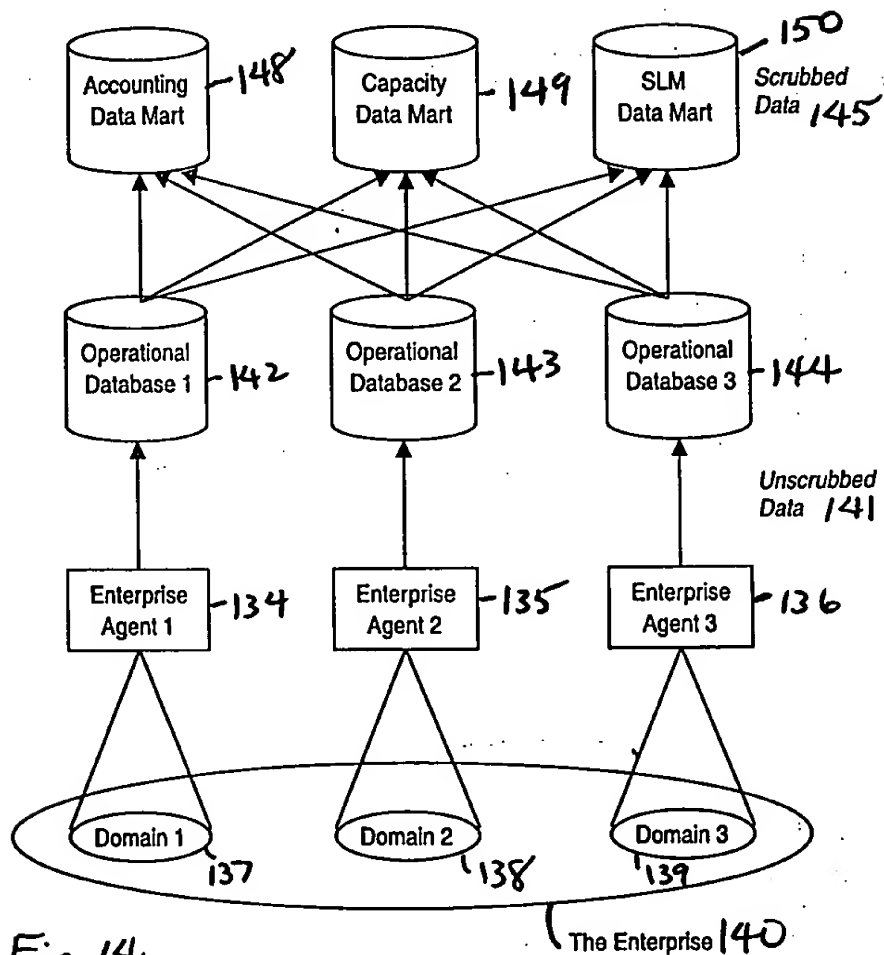
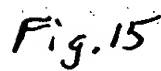


Fig. 14



The Enterprise 140

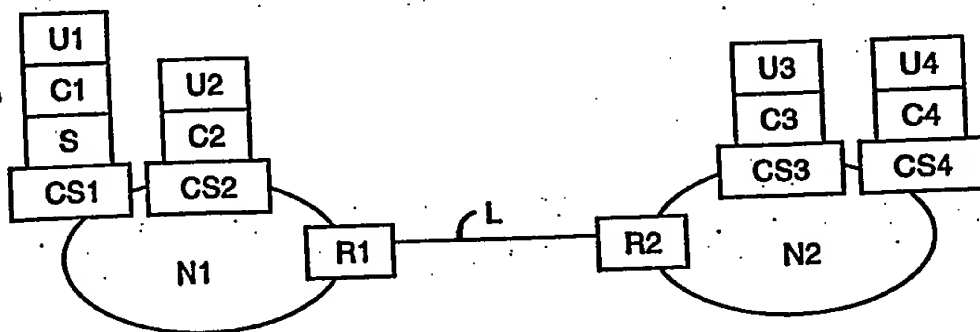


Figure 5.1, Fig. 16

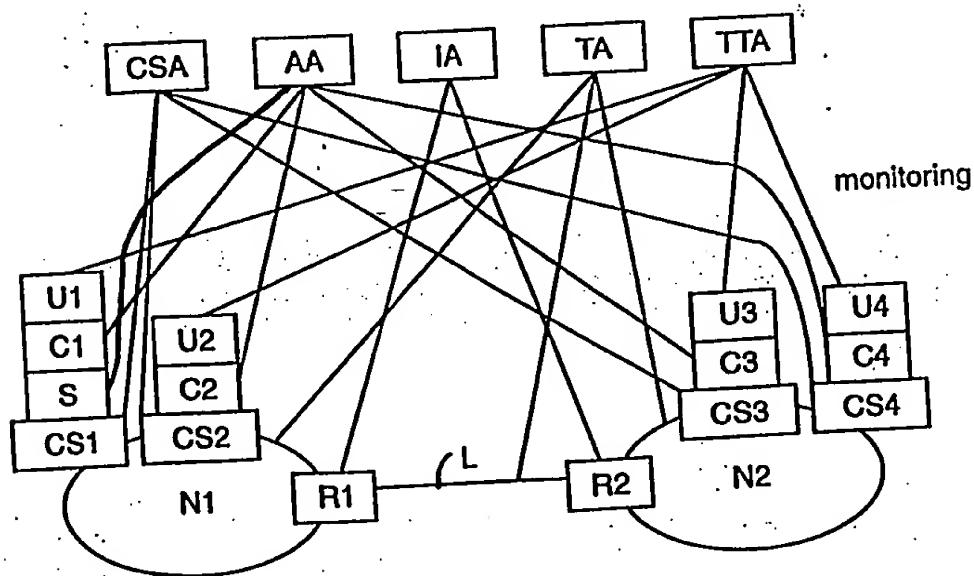


Figure 5.2 Fig. 17

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The diagram illustrates a hierarchical alarm correlation system architecture, organized into three main layers separated by dotted lines:

- Alarm Space (Top):** Contains the **ACA** (Alarm Correlation Algorithm) box and the **AB** (Alarm Buffer) cylinder. The **ACA** is connected to the **AB** via a line labeled "alarm correlation".
- Event-to-Alarm Mapping (Middle):** Contains five boxes: **CSA**, **AA**, **IA**, **TA**, and **TTA**. These boxes are connected to the **AB** via lines labeled "all alarms".
- Event Space (Bottom):** Contains two groups of event data:
 - N1:** A stack of boxes labeled **U1**, **C1**, **S**, and **CS1**, and another stack labeled **U2**, **C2**, and **CS2**.
 - N2:** A stack of boxes labeled **U3**, **C3**, and **CS3**, and another stack labeled **U4**, **C4**, and **CS4**.

Connections between the Event Space and the Event-to-Alarm Mapping layer are as follows:

- CSA** is connected to **CS1**, **CS2**, **CS3**, and **CS4**.
- AA** is connected to **CS1**, **CS2**, **CS3**, and **CS4**.
- IA** is connected to **CS1**, **CS2**, **CS3**, and **CS4**.
- TA** is connected to **CS1**, **CS2**, **CS3**, and **CS4**.
- TTA** is connected to **CS1**, **CS2**, **CS3**, and **CS4**.

Additionally, there are connections from **CS1** to **R1** and from **CS4** to **R2**. A line labeled **L** connects **R1** and **R2**.

Fig. 18

Fig. 19

Detect events in ~160
the network

↓
For each aspect of network ~161
operation, map event(s) to
alarm(s)

↓
Output alarms to ~162
alarm bucket

↓
Correlate/Evaluate alarms to ~163
determine network operation
status

↓
Report Network operation ~164
status

↓
Identify corrective actions ~165
necessary for desired operation of
network

↓
Implement corrective ~166
actions or report identified
corrective actions

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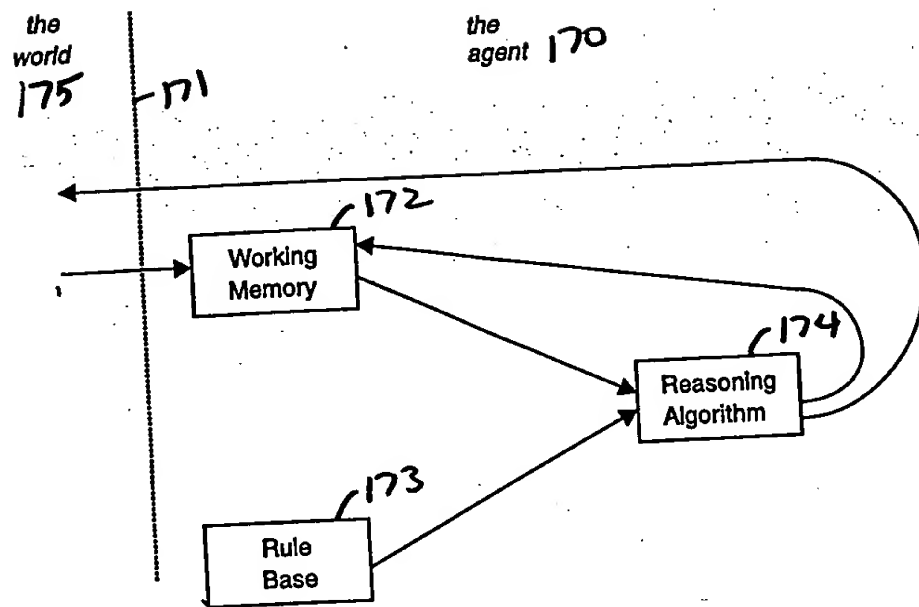


Fig. 21

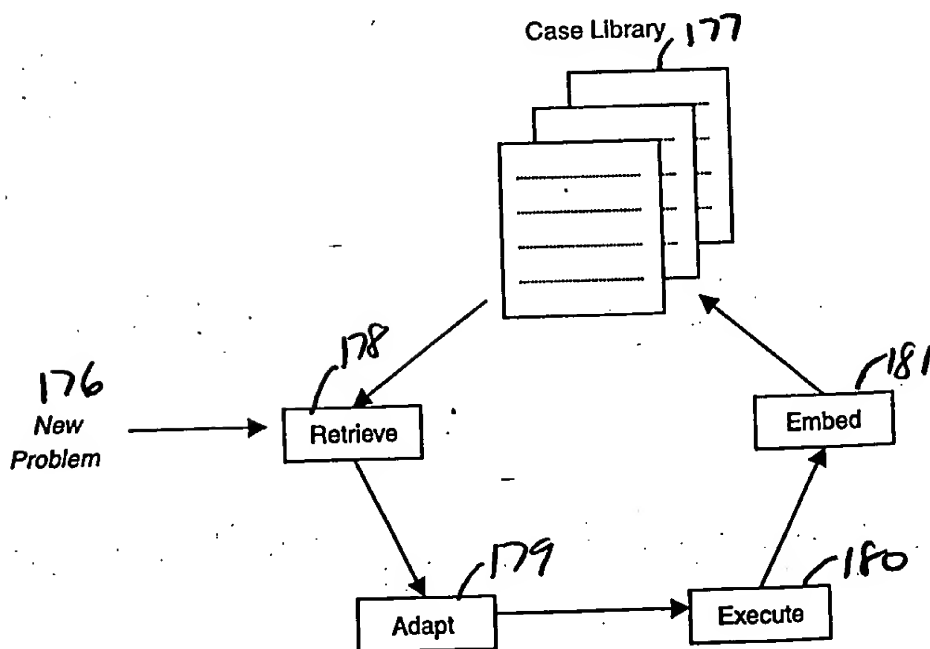


Fig. 22

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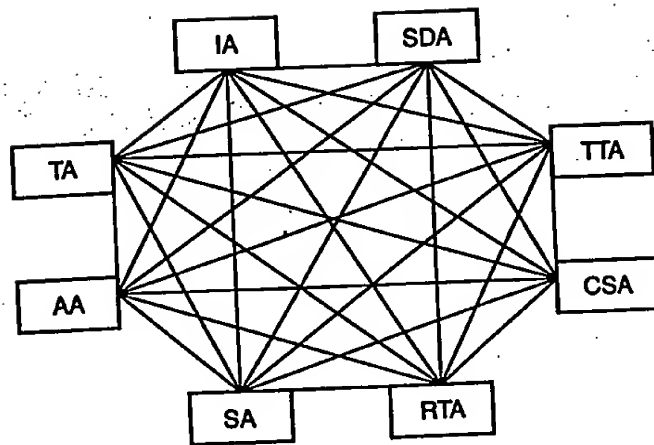


Fig. 23

190

Friday January 5 2001 -191			
	Service 1	Service 2	Service 3
Seattle			
Bldg 1	Up	Up	Down, up at 12 PM
Bldg 2	Down 8-10 PM	Down 8-10 PM	Down 8-10PM
Bldg 3	Up (Slow)	Up	Up
Sydney			
Bldg 1	Up	Up	Down, up ?
Bldg 2	Up	Up (slow)	Up
.			
.			
.			

Fig. 24

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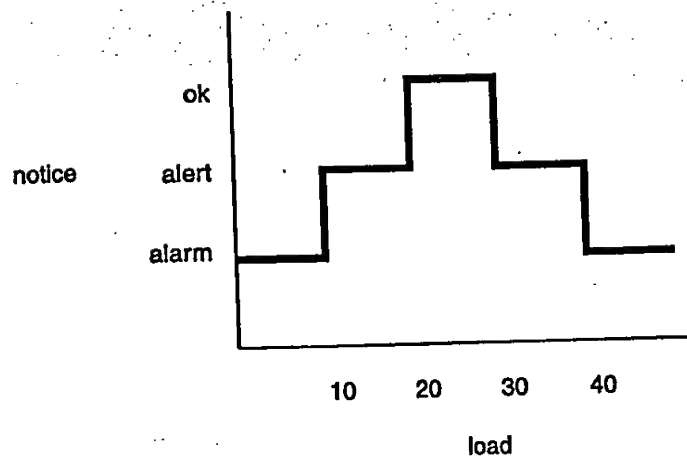


Fig. 25

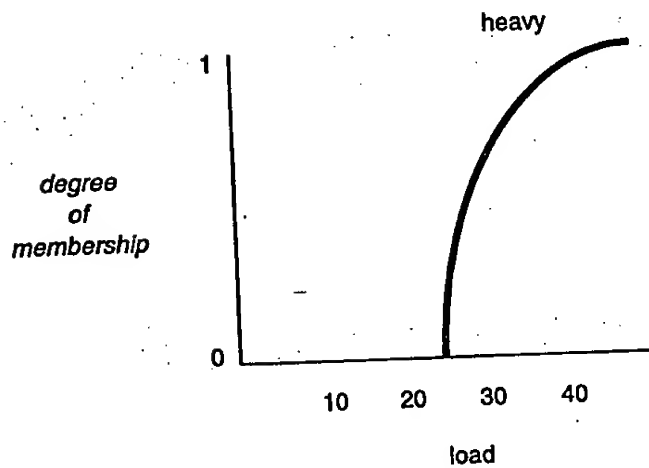


Fig. 26

0057225-052300

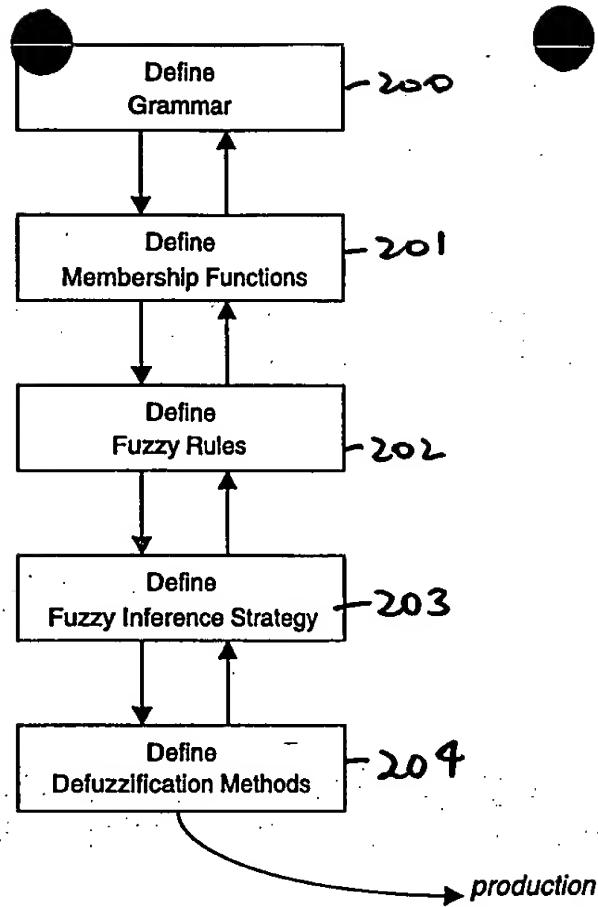


Fig. 27

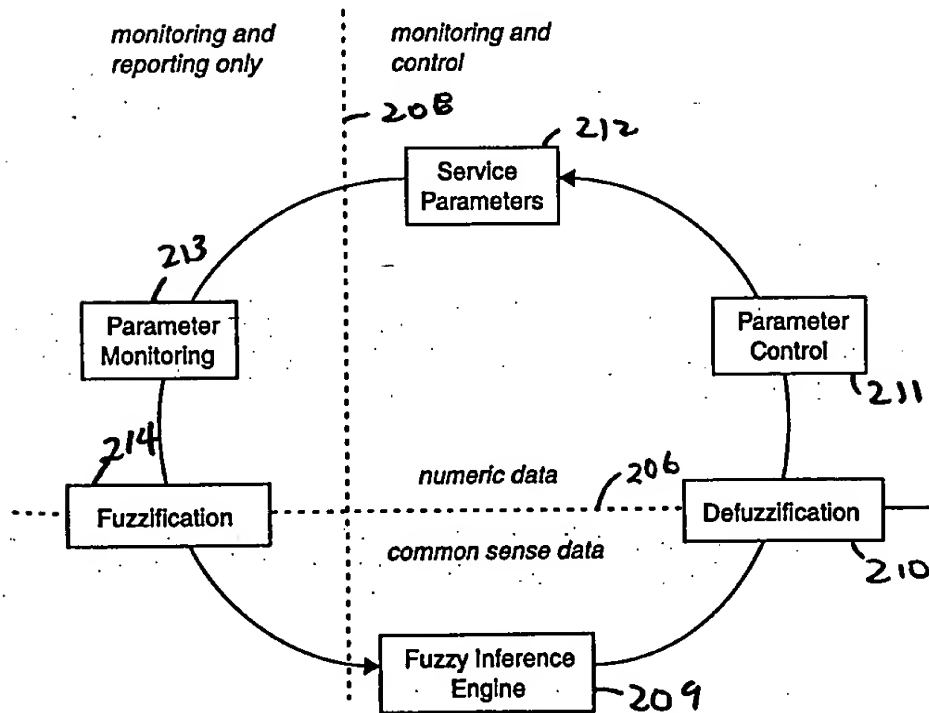


Fig. 28

0057225-052300

possible influences on SP ²²⁵

target ²²⁴

	P1	P2	P3	P4	P5	...	PN	SP
t1	---	---	---	---	---	---	---	---
t2	---	---	---	---	---	---	---	---
t3	---	---	---	---	---	---	---	---
t4	---	---	---	---	---	---	---	---
t5	---	---	---	---	---	---	---	---
t6	---	---	---	---	---	---	---	---
.								
.								
.								

²²²

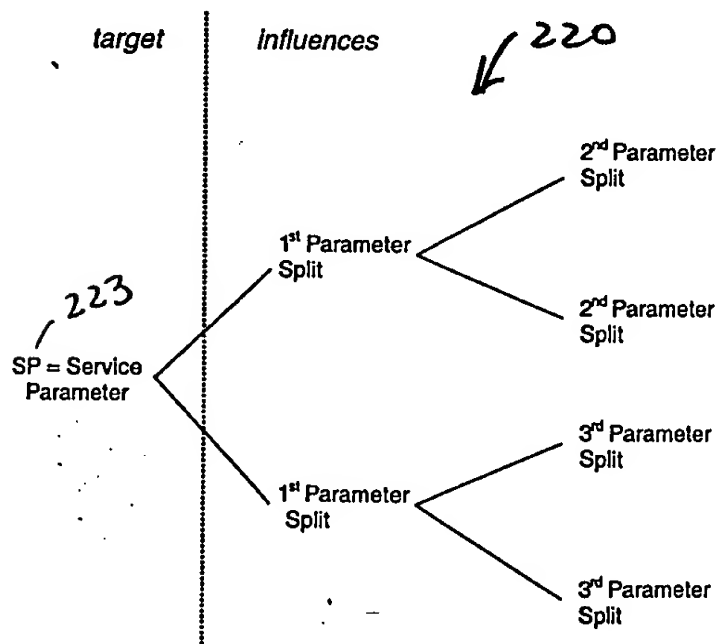


Fig. 29

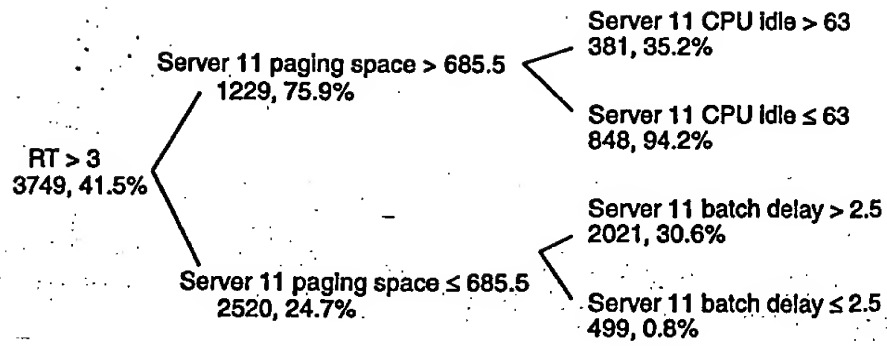


Fig. 30

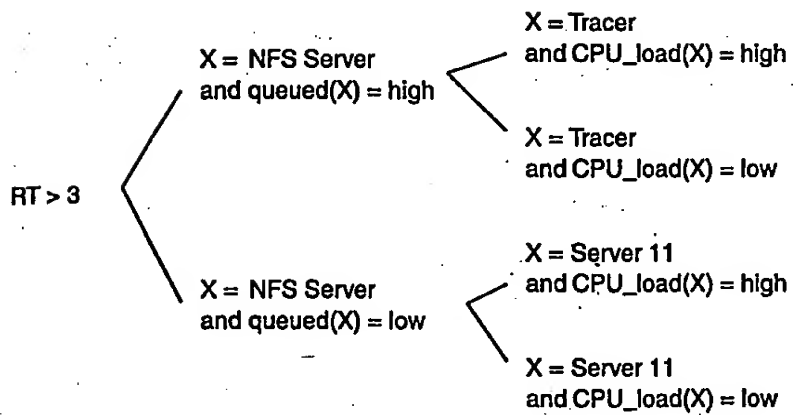


Fig. 31

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Service Agreement with XYZ Server Farm						
Name _____						
Address _____						
Phone _____						
Email _____						
Policies						
Availability	____ (select 90 – 100 %)				\$ ____	
Response Time	____ (select 2 – 5 sec)				\$ ____	
Security	____ (select high- med-low)				\$ ____	
Integrity	____ (select high- med-low)				\$ ____	
					Total: \$ ____	
Go Back		(Month)			Go Forward	
Default: Availability ____ Response time ____ Security ____ Integrity ____						
Send			Cancel			

Fig. 32

00577225-052300

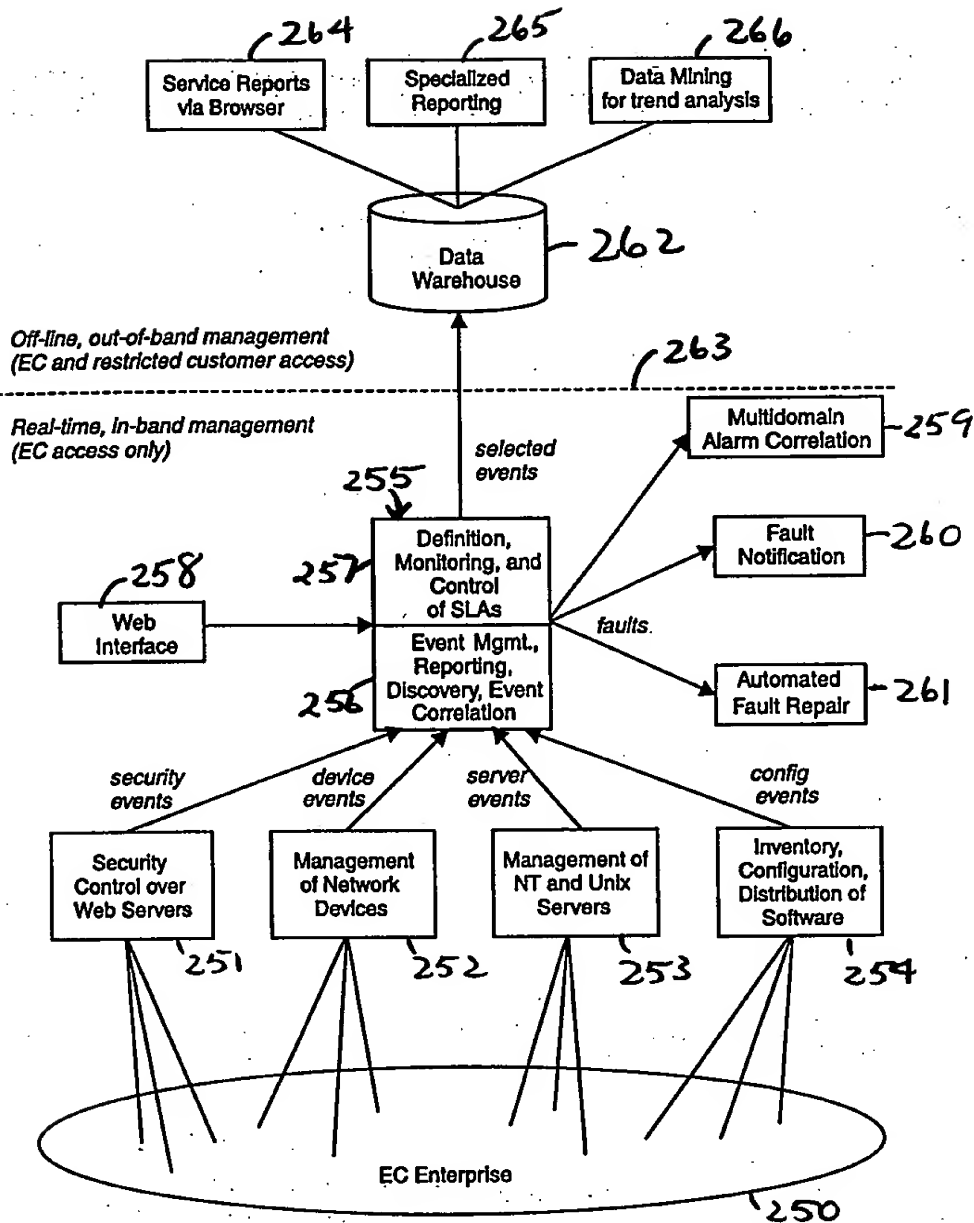


Fig. 33

The diagram illustrates the architecture of the Spectrum Consolidated Enterprise Console, divided into two main operational modes by a dashed line:

- Off-line, out-of-band management (EC and restricted customer access):**
 - Top Layer (Customer Tools):** Includes a Standard Browser (264'), Crystal Reports (265'), and Sylogic Data Mining Tool (266').
 - Database Layer:** A central Spectrum Data Warehouse (262') receives data from the tools above.
- Real-time, in-band management (EC access only):**
 - Central Console:** The Spectrum Consolidated Enterprise Console (256') is the core component, which also includes ICS Service Management (255').
 - Input/Output:**
 - Inputs:** Matrix Web Console (258') and selected events (255') from the ICS Service Management layer feed into the console.
 - Outputs:** The console sends faults to MicroMuse NetCool (259'), Clarify Help Desk (260'), and SpectroRx (261').
 - Monitoring Agents:** Four agents feed into the console:
 - Axent Monitoring Agents (251') sending security events.
 - Spectrum Infrastructure Monitoring Agents (252') sending device events.
 - BMC Patrol System Monitoring Agents (253') sending server events.
 - Novadigm EMD (254') sending config events.
- Foundation:** All agents and the console are connected to the EC Enterprise (250), represented by an oval at the bottom.

Fig. 34

0375 0300

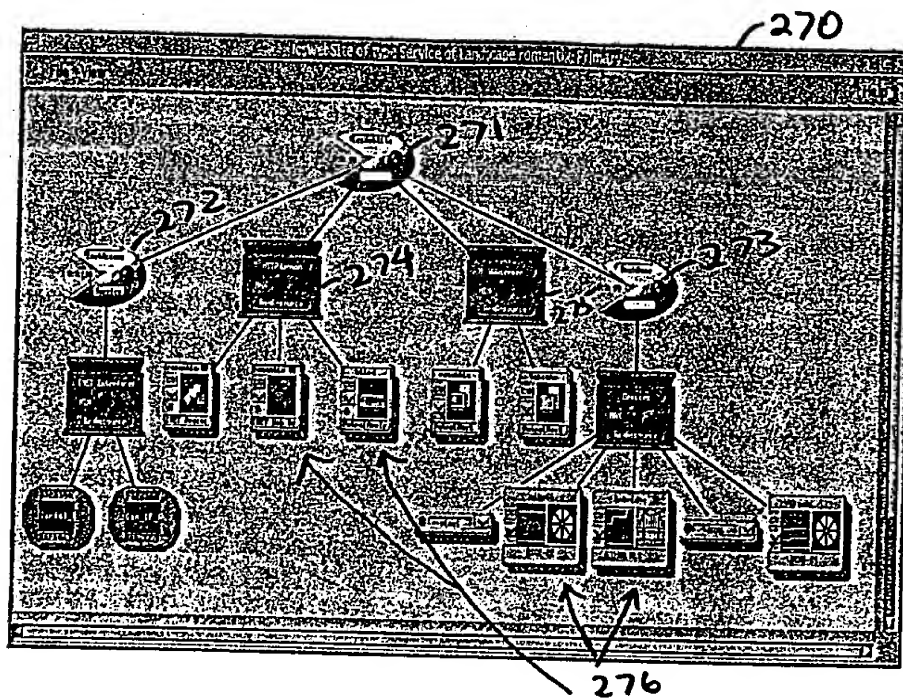


Fig. 35

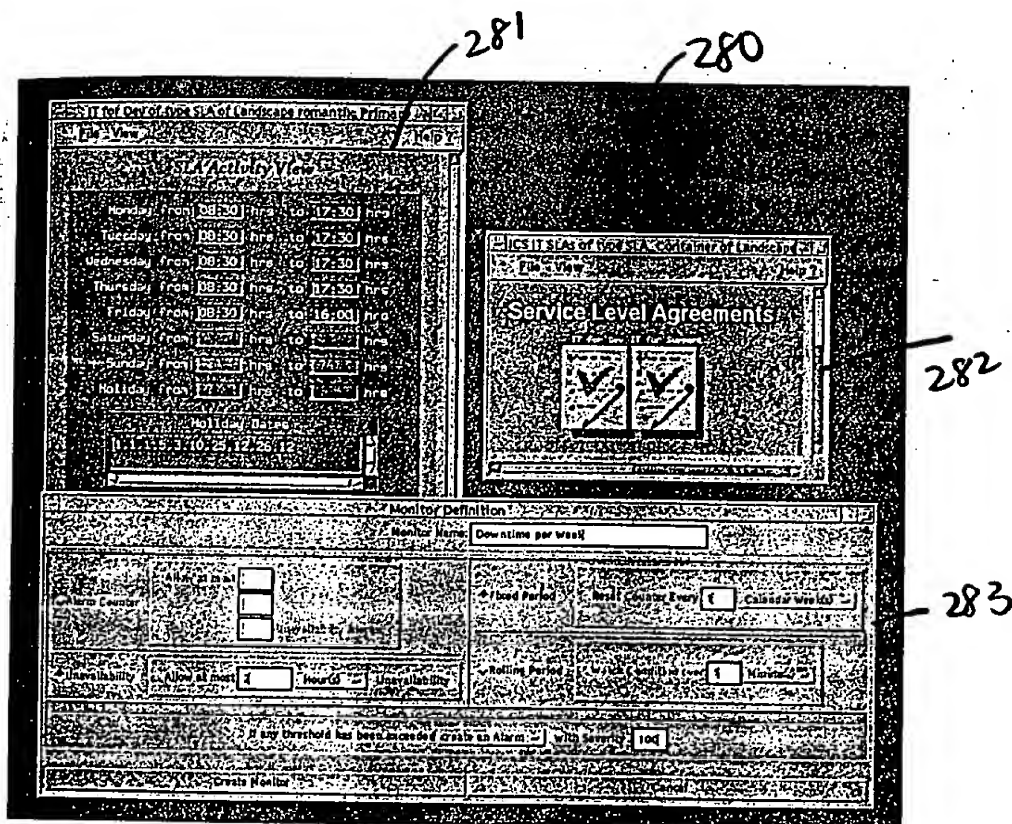


Fig. 36

0957225 052300

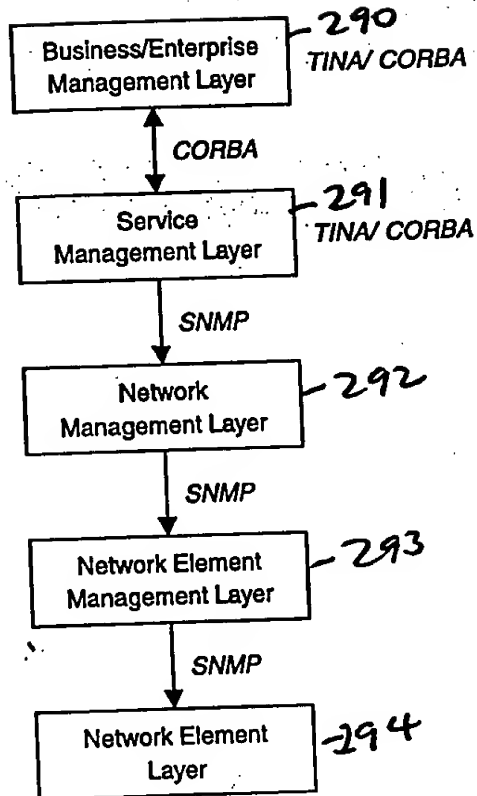


Fig. 37

005250" 52274560

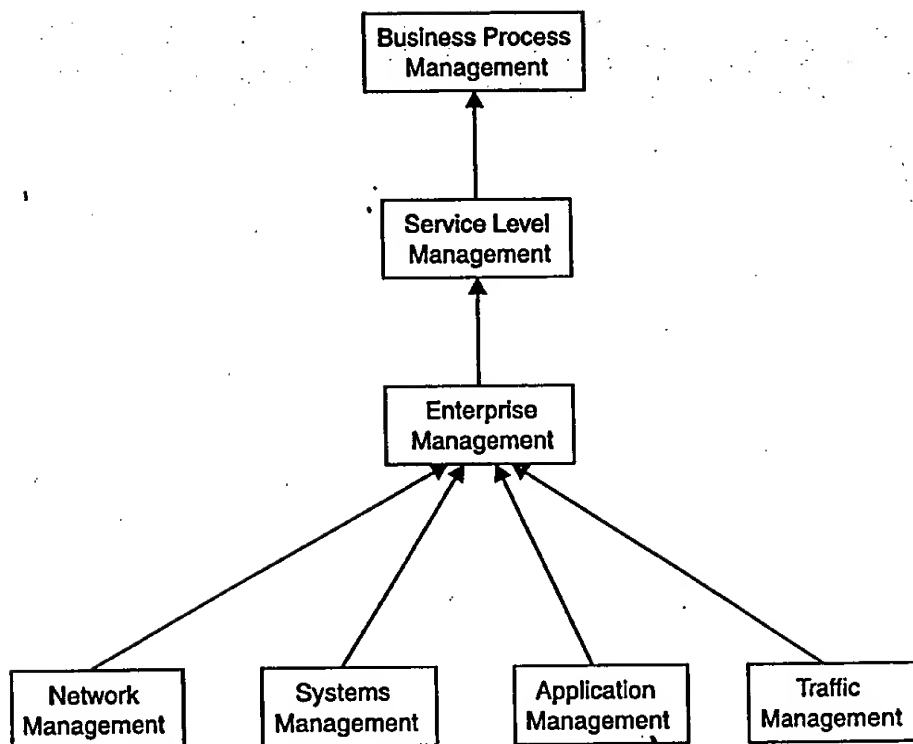


Fig. 38